



CALENVIROSCREEN 1.1: A TOOL FOR EVALUATING COMMUNITIES IN CALIFORNIA

October 23, 2013
Water Quality Coordinating Committee



CALENVIROSCREEN 1.1

CALIFORNIA COMMUNITIES ENVIRONMENTAL HEALTH SCREENING TOOL, VERSION 1.1 (CALENVIROSCREEN 1.1)

GUIDANCE AND SCREENING TOOL



September 2013 Update

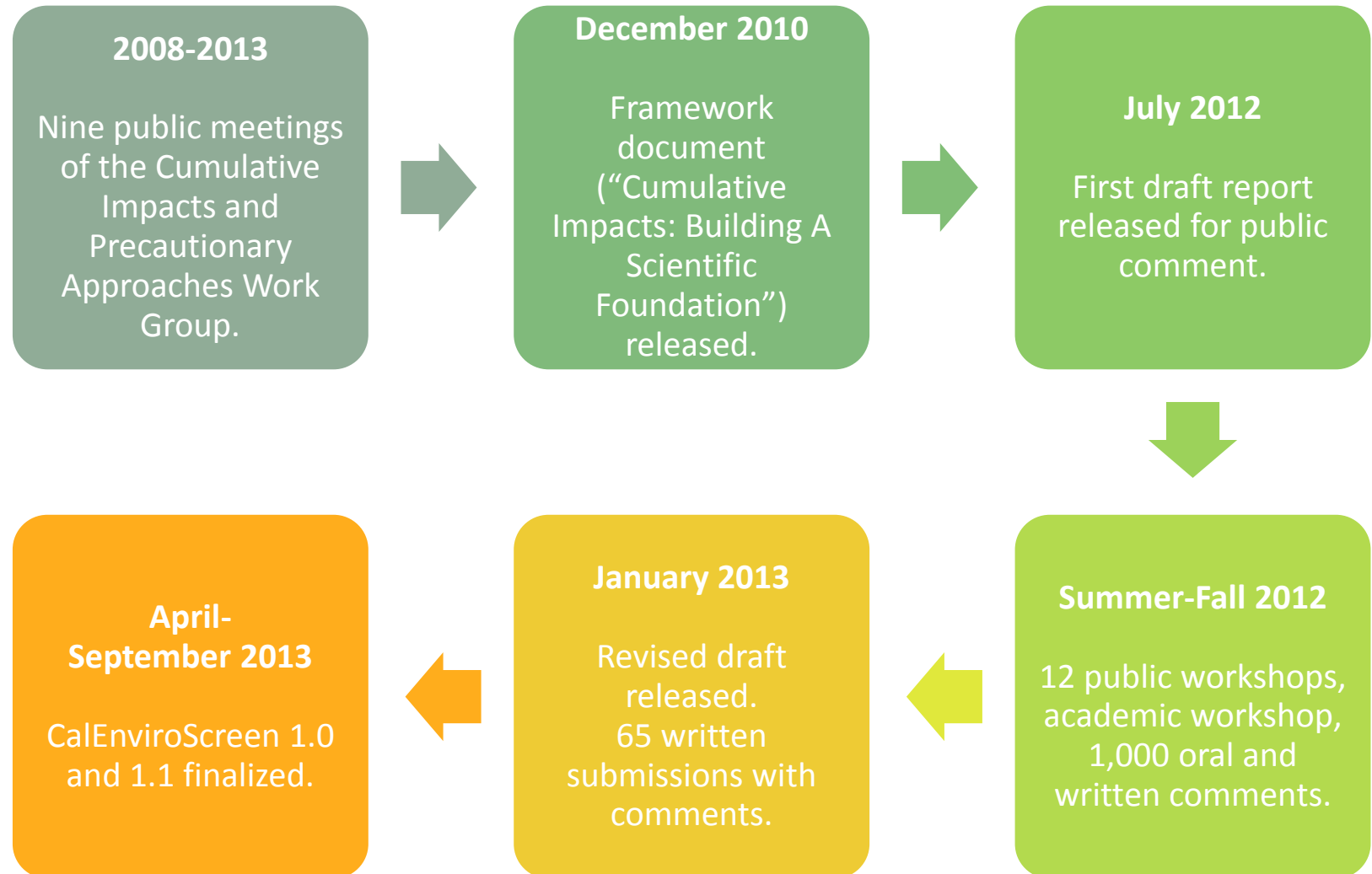
Matthew Rodriguez, Secretary
California Environmental Protection Agency

George V. Alexeeff, Ph.D., Director
Office of Environmental Health Hazard Assessment



- **Presents a broad picture of the relative burdens California communities face from environmental pollution**
- **Identifies 17 indicators of environmental and socioeconomic conditions**
- **Provides guidance on potential uses of tool**

DEVELOPMENT OF CalEnviroScreen 1.1



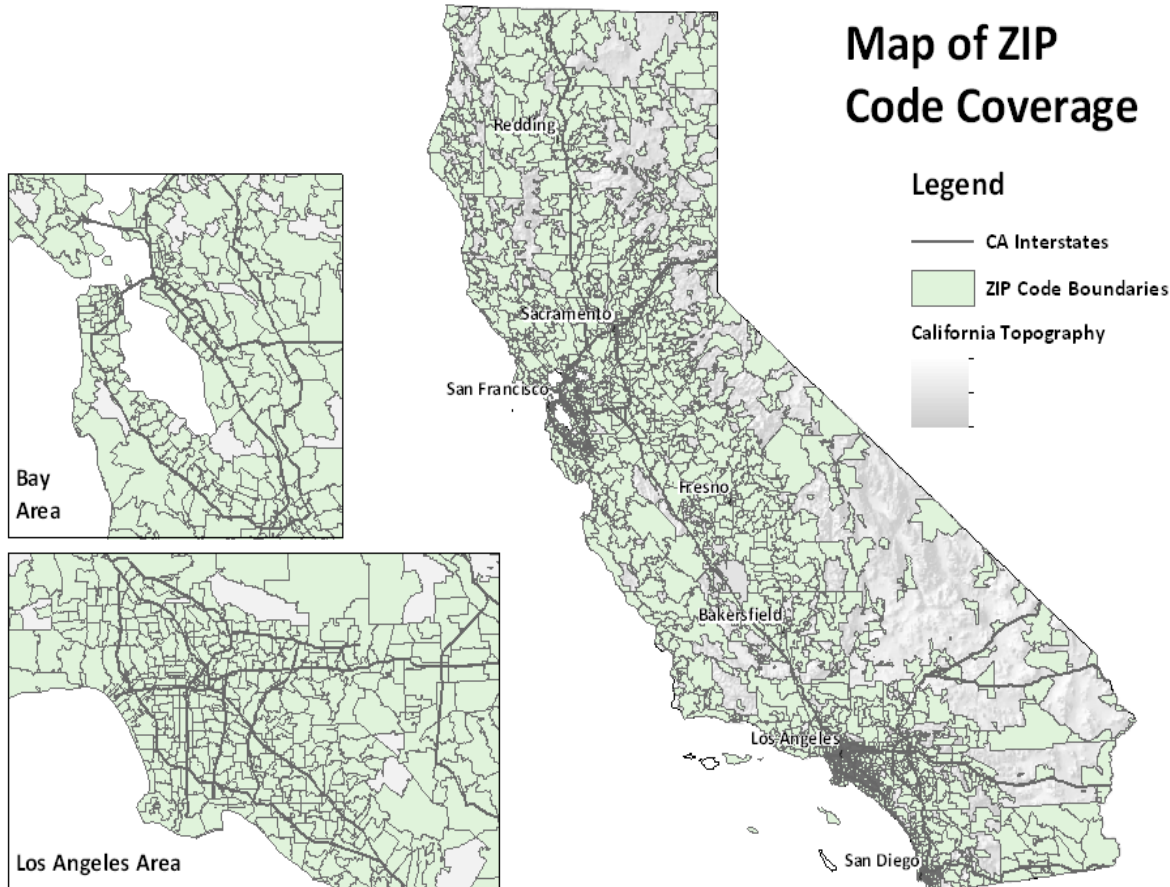
FOCUS OF CALENVIROSCREEN

“...exposures, public health or environmental effects from the combined emissions and discharges in a geographic area, including environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socioeconomic factors, where applicable and to the extent data are available.”

-- Working definition of
“cumulative impacts” by
Cal/EPA Interagency
Working Group on
Environmental Justice



GEOGRAPHICAL UNIT: ZIP CODE



- Familiar scale
- Publicly established
- Public recognition
- Not too large
- Not too small



INDICATORS USED

<i>Pollution Burden</i>		<i>Population Characteristics</i>	
Exposures	Environmental Effects	Sensitive Populations	Socioeconomic Factors
<input type="checkbox"/> PM 2.5 concentrations <input type="checkbox"/> Ozone concentrations <input type="checkbox"/> Diesel PM emissions <input type="checkbox"/> Pesticide use <input type="checkbox"/> Toxic releases from facilities <input type="checkbox"/> Traffic density	<input type="checkbox"/> Cleanup sites <input type="checkbox"/> Groundwater threats (Leaking underground tanks and cleanups) <input type="checkbox"/> Impaired water bodies <input type="checkbox"/> Solid waste sites and facilities <input type="checkbox"/> Hazardous waste facilities and generators	<input type="checkbox"/> Prevalence of children and elderly <input type="checkbox"/> Asthma emergency department visit rate <input type="checkbox"/> Rate of low birth weight births	<input type="checkbox"/> Educational attainment <input type="checkbox"/> Linguistic isolation <input type="checkbox"/> Poverty: Percent residents below 2x national poverty level



CRITERIA FOR INDICATOR SELECTION

- Provide a good measure of the contribution to the component
- Pollution burden indicators should relate to issues that may be actionable by Cal/EPA
- Population characteristic indicators should relate to demographic factors that may influence vulnerability to disease
- Publicly available
- Statewide and location-based information
- Good quality data

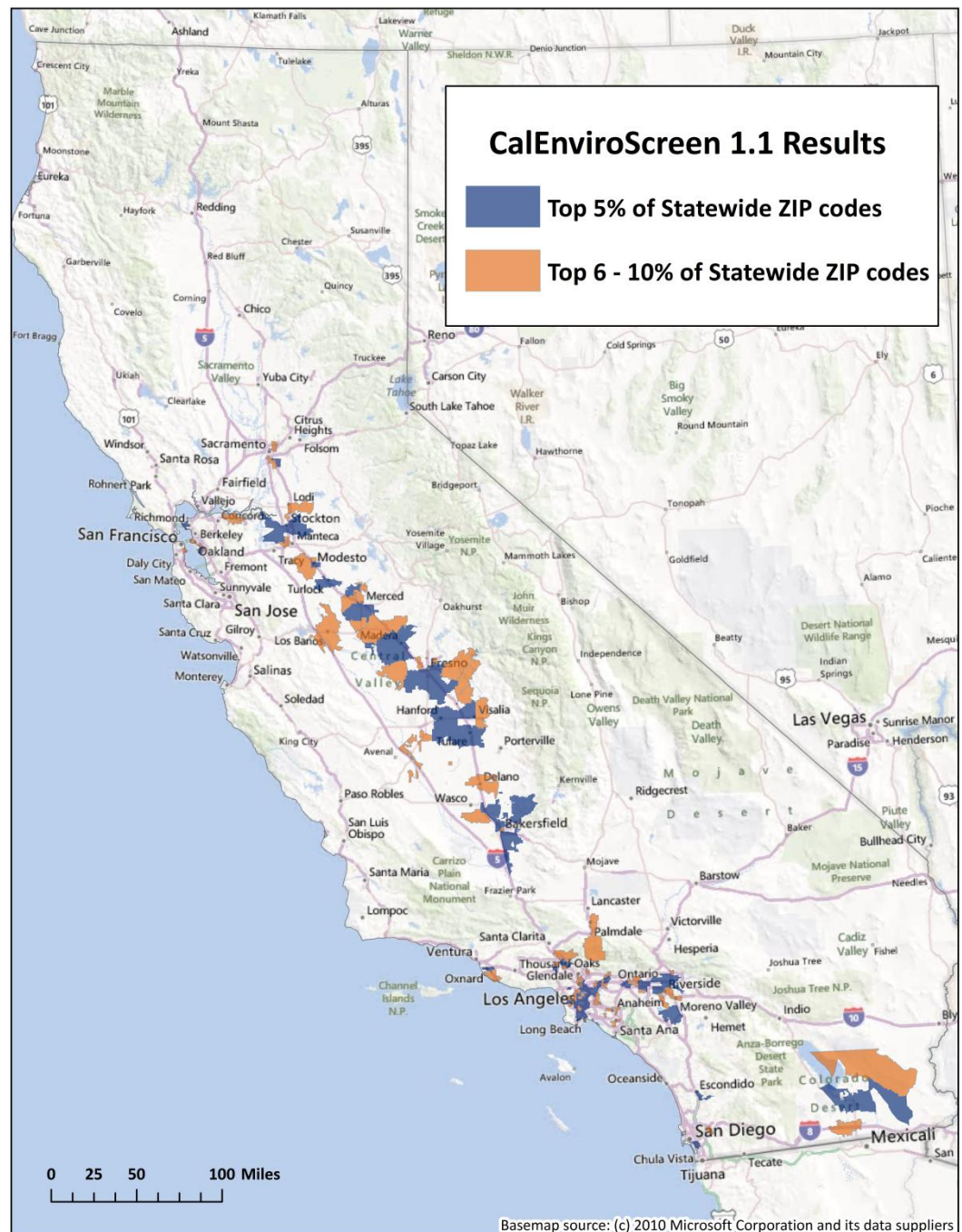


RELATIVE SCORING OF ZIP CODES

- Calculate relative score for each indicator (percentiles)
- Combine 17 indicators together to calculate overall CalEnviroScreen score
- CalEnviroScreen scores allow comparison of relative scores between ZIP codes

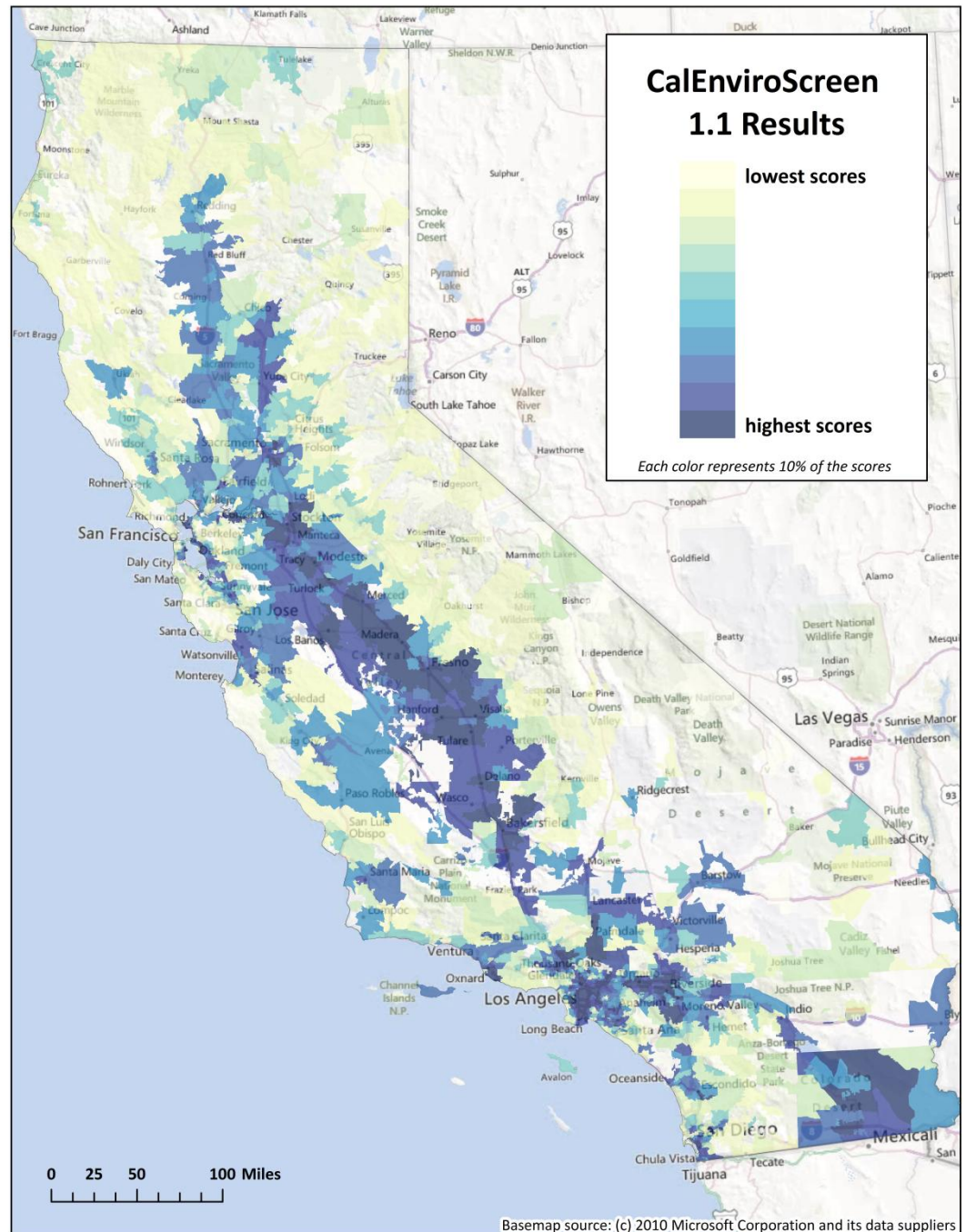
HIGHEST 10% CALENVIROSCREEN SCORES: STATEWIDE

- Represents 176 of CA's 1769 Zip codes.
- Covers 7.7 million people (21 percent of CA's population).



CALENVIROSCREEN SCORES: STATEWIDE

- Represents all 1769 census ZIP codes in CA
- Each color represents ~10% of all ZIP codes



SOME POTENTIAL USES OF TOOL

- To aid ongoing planning and decision-making within Cal/EPA
 - Environmental Justice Small Grant program
 - Promote greater compliance with environmental laws
 - Prioritize site-cleanup activities
 - Identify opportunities for sustainable development in heavily impacted neighborhoods
- SB 535 (De Leon, 2012)
 - Cal/EPA shall identify “disadvantaged communities” for investment opportunities based on geographic, socioeconomic, public health and environmental hazard criteria.



CAUTIONS ABOUT THE TOOL

- Is not a health risk assessment
- Is not a substitute for a CEQA-required cumulative impacts assessment and does not determine whether a specific project's impacts are significant under CEQA



CHANGES IN CalEnviroScreen

- Removal of race/ethnicity indicator
- Adapt tool to produce scores for census tracts
- Develop an indicator for drinking water
- Outreach with interested local governments and others on potential uses of CalEnviroScreen
- Continue to solicit suggestions for overall refinement and updating of tool



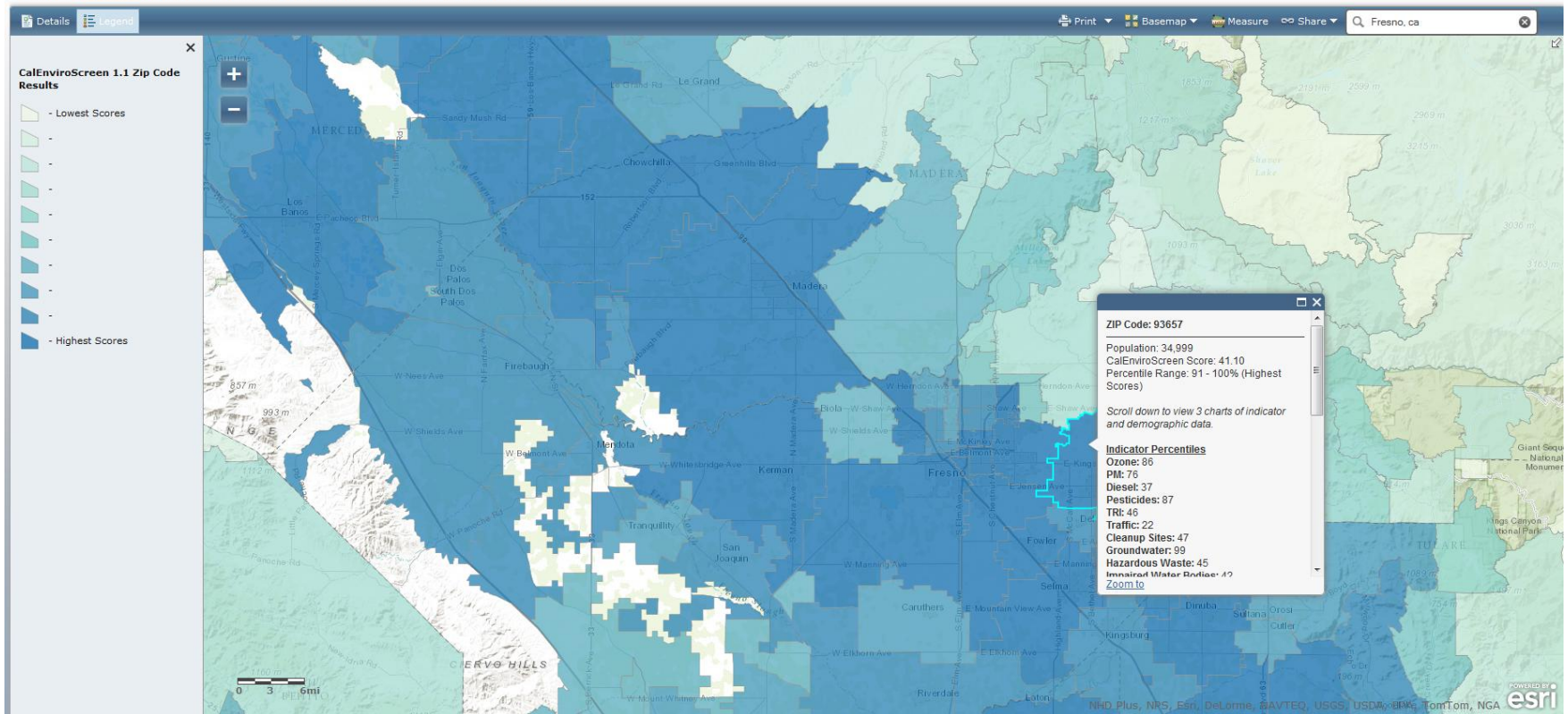
PUBLICLY AVAILABLE RESULTS

- CalEnviroScreen Report
 - Maps for individual indicators (small)
 - Description of each indicator
- Excel spreadsheet
 - “Raw” values and percentiles for each indicator
 - Overall CalEnviroScreen scores
 - Grouped scores (e.g., Top 5 and 10% scoring ZIPs, etc.)
- Google Earth results (overall; Top 5 & 10%)
- ArcGIS geodatabase
- On-line mapping tool (ArcGIS On-Line)



ONLINE TOOL

CalEnviroScreen 1.1 Statewide ZIP Code Results



Available at: oehha.ca.gov/ej/ces11.html